

USSR/Pharmacology and Toxicology. Muscle Relaxants.

V

Abs Jour: Ref Zhur-Biol., No 19, 1958, 89868.

of 30-40 minutes with preservation of natural respiration; in combination with ether, 1.5-2 ml of a 0.1% solution of I was required. I is 20 times more active than diplacin. II possesses a brief curariform effect by producing prolonged depolarization. For the purpose of curarization, II is administered intravenously in doses of 2.5 ml of a 1% solution. The duration of the effect is 4-5 minutes. For a longer effect, the drip method of administration is used (20 ml of a 1% solution of II in 100 ml of physiological solution of II at a rate of 30-40 drops per min.). II seems to be the most controllable drug, and according to the author, has no contra-indications. In clinical

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USSR/Pharmacology and Toxicology. Muscle Relaxants.

Abstr Jour: Ref Zhur-Biol., No 12, 1958, 89868.

V

doses, the described preparations do not show any  
toxic effect on the human and animal organism. --  
H.B. Vysotskaya.

Card : 3/3

V-24

GRIGOR'YEV, M.S. (Leningrad, ul. Smirnova, d.8, kv.36); UVAROV, B.S.  
(Leningrad, Orenburgskaya ul., d.11, kv.2)

Modern methods of anesthesia in surgery for lung cancer [with  
summary in English]. Vop.onk. 3 no.4:446-451 '57. (MIRA 10:11)

1. Iz khirurgicheskoy kliniki dlya usovershenstvovaniya vrachev  
(nach. - deystvitel'nyy chlen AMN SSSR prof. P.A.Kupriyanov)  
Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.

(PNEUMONECTOMY, in var.dis.

cancer, anesth. (Rus))

(ANESTHESIA,

in pneumonectomy in cancer (Rus))

GRIGOR'YEV, M.S., professor, referent

Minutes of sessions nos 1174-1175 of the Pirogov Surgical Society.  
Abstracted by M.S.Grigor'yev. Vest.khir. 78 no.1:146-151 Ja '57.  
(SURGERY) (MLRA 10:3)

GRIGOR'YEV, M. S.

GRIGOR'YEV, M. S., professor, referee:

minutes of sessions No. 1179-1180 of the Pirogov Surgical Society.  
Vest.khir. 78 no. 4: 134-138 Ap '57. (HLRA 10.9)  
(SURGERY)

GRIGOR'YAN, M.S., professor (Leningrad, K-9, ul. Smirnova, d.8, kv.36);  
MISHURA, V.I.

Transventricular pulmonary valvulotomy and infundibulectomy in some  
congenital cardiac defects [with summary in English, p.158]. Vest.  
khir. 78 no.5:35-45 My '57. (MLRA 10:7)

1. Is khirurgicheskoy kliniki usovershenstvovaniya vrachey (nach. -  
prof. P.A.Kupriyanov) Voenno-meditsinskoy ordena Lenina akademii  
im. S.M.Kirova.

(CARDIOVASCULAR DEFECTS, CONGENITAL, surg.  
infundibulectomy & transventric. pulm. valvulotomy, review)

GRIGOR'YEV, M.S., professor, referent

Minutes of session No.1182 of the Pirogov Surgical Society. Vest.  
khir. 78 no.6:151-154 Je '57. (MLRA 10:8)  
(SURGERY)

*Grigor'ev, M.S.*  
GRIGOR'YEV, M.S., professor, referent

Minutes of sessions Nos. 1183-1185 of the Pirogov Surgical Society.  
Vest.khir. 79 no.7:150-157 J1 '57. (MIRA 10:10)  
(SURGERY, OPERATIVE)



GRIGOR'YAN, M.S.  
GRIGOR'YAN, M.S., referent, professor

Minutes of sessions Nos. 1186-1188 of the Pirogov Surgical Society.  
Vest.khir. 79 no.8:135-144 Ag '57. (MIRA 10:10)  
(SURGERY)

GRIGORI'YEV, M.S., referent

Minutes of the Pirogov Surgical Society, meeting No.1190, March 20,  
1957. Vent.khir. 79 no.10:152-154 O '57. (MIRA 10:12)  
(SURGERY)

GRIGOR'YEV, M.S., referent, prof.

Minutes of sessions Nos. 1191-1192 of the Pirogov Surgical Society.  
Vest.khir. 79 no.11:150-156 N'57. (MIRA 11:3)  
(SURGERY)

ORIGOR'YEV, M.S., prof., referent

Minutes of session No.1193 of the Pirogov Surgical Society,  
May 8, 1957. Vest.khir. 80 no.1:146-151 Ja '58. (MIRA 11:4)  
(SURGERY)

GRIGOR'YEV, M.S., prof. referent.

Minutes of sessions Nos.1194-1195 of the Pirogov Surgical Society.  
Vest. khir. 80 no.2:146-152 P '58. (MIRA 11:7)  
(SURGERY)

GRIGOR'YEV, M.S., prof., referent

Minutes of session No.1196 of the Pirogov Surgical Society. Vest.  
khir. 80 no.3:155-157 Mr '58. (MIRA 11:4)  
(SURGERY)

GRIGOR'YEV, M.S., referent prof., GANOV, V.S., referent prof.

Minutes of sessions Nos. 12-7-1208 of the Pirogov Surgical Society.  
Vest.khir. 81 no.8:145-150 Ag '58 (MIRA 11:9)  
(SURGERY)

GRIGOR'YEV, M.S., Leningrad, ul. Smirnova, 8, kv.36; BURMISTROV, M.I.

Defects of the septum atriorum and their closure by Sondergaard's  
method. Grad.khir. 1 no.1:16-24 Ja-F '59. (MIRA 13:6)

1. Iz khirurgicheskoy kliniki dlya usovershenstvovaniya vrachey  
(nach. - prof. P.A. Kupriyanov) Voenno-meditsinskoy ordena Leni-  
na akademii imeni S.M. Kirova.  
(HEART--ABNORMALITIES AND DEFORMITIES) (HEART--SURGERY)



GRIGOR'YEV, M.S., prof. (Leningrad, ul. Smirnova, 8, kv.36); IZBINSKIY, A.L.,  
kand.med.nauk

Tracheostomy in operations on organs of the chest. Vest.khir.  
82 no.4:16-25 Ap '59. (MIRA 12:6)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey  
(nach. - prof.P.A.Kupriyanov) Voenno-meditsinskoy ordena  
Lenina akademii im. S.M.Kirova.  
(TRACHEA---SURGERY) (RESPIRATORY ORGANS---DISEASES)

GRIGOR'YEV, M.S., prof.; SHANIN, Yu.N., kand.med.nauk; UVAROV, B.S.

"Brief practical manual on anesthesia" by IU.V. Beringer, A.A. Zykov.  
Reviewed by M.S. Grigor'ev, IU.N. Shanin, B.S. Uvarov. Vest.khir. 83  
no.8:142-144 Ag '59. (MIRA 13:1)  
(ANESTHESIOLOGY) (BERINGER, IU.V.) (ZYKOV, A.A.)

GRIGORYEV, M. S., (Prof.), AKSENOV, B. N., IZBINSKIY, A. P., MESHCHERYAKOV, N. A,  
UVAROV, B. S., and SHANIN, Yu. N., -- Leningrad

"Anthesia for Intrathoracic Operations on the Esophagus."

Report submitted for the 27th Congress of Surgeons of the USSR, Moscow,  
23-28 May 1960.

ANICHKOV, M.N., dots.; ANTELAVA, N.V., prof.; BISENKOV, N.P., kand. med. nauk; BOGUSH, L.K., prof.; GRIGORYEV, M.S., prof.; DYSKIN, Ye.A., kand. med. nauk; KEVESH, Ye.L., prof.; KOLESOV, A.P.; KOLESOV, V.I., prof.; KUPRIYANOV, P.A., prof.; LINBERG, B.E., prof.; MAKSIMENKOV, A.N., prof.; OSIPOV, B.K., prof.; SAVITSKIY, A.I., prof.; UVAROV, B.S.; UGLOV, F.G., prof.; Kholdin, S.A., prof.; PETROVSKIY, B.V., prof., otv. red.; BAKULEV, A.N., akademik, red.; GULYAYEV, A.V., prof., red.; YEGOROV, B.G., prof., red.; PANKRAT'YEV, B.Ye., prof., red.; PYTEL', A.Ya., prof., red.; RIKHTER, G.A., prof., red.; FILATOV, A.N., prof., red.; CHAKLIN, V.D., prof., red.; RYBUSHKIN, I.N., doktor med. nauk, red.; RULEVA, M.S., tekhn. red.

[Multivolume manual on surgery] Mnogotomnoe rukovodstvo po khirurgii. Moskva, Medgiz. Vol.5. [Chest surgery; thoracic wall, pleura, and lungs] Khirurgiya grudi; grudnaya stenka, plerava i legkie. 1960. 727 p. (MIRA 15:3)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Antelava, Bogush, Maksimenkov, Savitskiy, Kholdin, Chaklin).
  2. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Kupriyanov, Petrovskiy, Yegorov).
- (CHEST—SURGERY)

GRIGOR'YEV, M.S.; AKSENOV, B.N.

Some problems of surgery in cancer of the upper esophagus. Vest.  
khir. 85 no. 8:60-67 Ag '60. (MIRA 14:1)  
(ESOPHAGUS—CANCER)

VINOGRADOV, Vasilii Mikhaylovich; D'YACHENKO, Petr Konstantinovich;  
GRIGOR'YEV, M.S., red.; KHARASH, G.A., tekhn.red.

[Principles of clinical anesthesiology; general anesthesiology]  
Osnovy klinicheskoi anesteziologii; obshchaia anesteziologiya.  
Leningrad, Gos.izd-vo med.lit-ry Medgiz, Leningr.otd-nie, 1961.  
358 p. (MIRA 14:6)

(ANESTHESIOLOGY)

GRIGOR'YEV, M.S. (Leningrad K-9, ul. Smirnova, d. 8, kv. 36); BURMISTROV, M.I.

Median sternotomy in some operations on the heart and the anterior  
mediastinum. Grud. khir. 3 no. 1:33-37 Ja-F '61. (MIRA 16:5)

1. Iz khirurgicheskoy kliniki dlya usovershenstvovaniya vrachey  
(nachal'nik - prof. P.A. Kupriyanov) Voenno-meditsinskoy ordena  
Lenina akademii imeni S.M. Kirova.

(MEDIASTINUM—SURGERY) (STERNUM—SURGERY) (HEART—SURGERY)

D'YACHENKO, Petr Konstantinovich; VINOGRADOV, Vasilii Mikhaylovich;  
GRIGOR'YEV, M.S., red.; KHARASH, G.A., tekhn. red.

[Specialized anesthesiology; selection of the method of  
anesthesia] Chastnaia anesteziologiya; vybor metoda obezbo-  
li-vaniia. Leningrad, Medgiz, 1962. 407 p. (MIRA 15:12)  
(ANESTHESIOLOGY)



DRACHINSKAYA, Yelizaveta Semenovna; BREYDO, Isaak Samuilovich;  
GRIGOR'YEV, M.S., red.; LEBEDEV, Z.V., tekhn. red.

[Surgery of the thyroid gland] Khirurgiya shchitovidnoi  
zhelazy. Leningrad, Medgiz, 1963. 233 p. (MIRA 16:4)  
(THYROID GLAND--SURGERY)

GRIGOR'YEV, M.S., prof.

Some problems of surgical treatment of mitral stenosis. Trudy I.M. S.  
no.2:20-22 '63. (MIRA 17:30)

1. Iz kafedry gospiatal'noy khirurgii Leningradskogo pediatricheskogo  
meditsinskogo instituta.

GRIGOR'YEV, M.S., prof.

Comparative evaluation of transventricular and transatrial commissurotomy in mitral stenosis. Vest.khir.90 no.2:76-81 F'63. (MIRA 16:7)

1. Iz gosspital'noy khirurgicheskoy kliniki (zav.- prof. M.S. Grigor'yev) Leningradskogo pediatricheskogo meditsinskogo instituta (rektor - dotsent Ye.P.Semenova) na baze bol'nitsy imeni Kuybysheva (glavnyy vrach - Ye.V.Mamysheva). (MITRAL VALVE--SURGERY)

GRIGOR'YEV, M.V. (Kaliningrad)

Marine institute in Norway. Priroda 49 no.8:71 Ag '60.

(MIRA 13:8)

(Bergen, Norway--Oceanographic research)

ORMONT, B.F., prof., red.; ALIMARIN, I.P., red.; GRIGOR'YEV, M.V., red.;  
LASTOVSKIY, B.P., prof., red.; POROZHENKO, B.L., red.; SAZHIN,  
M.P., red.; TARASOV, G.Ya., red.; YAKOVLEV, Yu.V., red.; EL'KIND,  
L.M., red.izd-vs; ISLENT'YEVA, P.O., tekhn.red.

[Quality of materials which are used in semiconductor engineering;  
works of the Permanent Colloquium on Variable Composition Solid  
Phases for the years 1957-1958] Kachestvo materialov dlia polu-  
provodnikovoi tekhniki; trudy kollokviuma za 1957-1958 gg. Pod  
obshchei red. B.F.Ormonta. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry  
po chernoi i tsvetnoi metallurgii. Nos.8-30. 1959. 192 p.

(MIRA 13:6)

1. Postoyannyy mezhinstitutskiy kollokvium po tverdym fazam pere-  
mennogo sostava. 2. Fiziko-khimicheskii institut im. L.Ya.Karpova;  
predsedatel' Mezhinstitutskogo kollokviuma po tverdym fazam peremennogo  
sostava (for Ormont). 3. Chleny-korrespondenty AN SSSR (for  
Alimarin, Sazhin). 4. Institut geokhimii i analiticheskoy khimii  
im. V.I.Vernadskogo AN SSSR (GEOKHI AN SSSR) (for Alimarin, Yakovlev).  
5. Nauchno-issledovatel'skiy institut Komiteta radioelektroniki (for  
Grigor'yev, Tarasov). 6. Vsesoyuznyy nauchno-issled.institut khimicheskikh  
reaktivov (IREA) Komiteta khimii (for Lastovskiy). 7. Gosudarstvennyy  
institut redkikh i malykh metallov (Giredmet) (for Porozhenko, Sazhin).

(Semiconductors)

GRIGOR'YEV, M.V. (Kaliningrad)

On the shores of the Bay of Naples. Priroda 50 no.1:91-92 Ja '61.  
(MIRA 1:1)  
(Biological research)

Shchegolev, M. V. (Baku)

Exhibition of submarine fauna in Vancouver. Priroda 51 no.7:100-  
102 J1 '62. (MIRA 15:9)  
(Vancouver--Aquariums)

KASSIL', G.N.; GRIGORIYEV, M.YU.; JUREYEV, G.L.; LAYT, M.L.; SHAGAL, D.I.

Humoral mechanisms of reactions caused by the introduction of carbocholine into cerebrospinal fluid. Dokl. AN SSSR 156 no. 4:964-967 Ju '64. (MIRA 17:6)

1. Predstavleno akademikom V.N.Chernigovskim.



GAL'PERIN, Yu.M.; GRIGOR'YEV, M.Yu.

Differentiation of nervous and humoral effects by simultaneous registration of motor activity of an innervated and denervated loop of small intestine. Biul. eksp. biol. i med. 57 no.3:23-25 Mr '64. (MIRA 17:11)

1. Patofiziologicheskaya laboratoriya (zav. - kand. med. nauk Yu.M. Gal'perin) Moskovskogo oblastnogo nauchno-issledovatel'skogo instituta imeni Vladimirskogo (dir. P.M. Leonenko) i laboratoriya neyro-gumoral'noy regulyatsii (zav. - chlen-korrespondent AN SSSR prof. N.I. Grashchenkov) AN SSSR, Moskva. predstavlena deystvitel'nym chlenom AMN SSSR N.I. Grashchenkovym.

GRIGOR'YEV, M. YU.

✓ 975. PREPARATION OF KUZNETSK BASIN COALS. Grigor'ev, M. Yu.  
(Ugol (Coal), Feb. 1953, 4-11). The problem of improving coking qualities  
is examined with tabulated data. Bright coals containing mostly vitrinite  
with low specific gravities and good coking qualities are interspersed in  
series with dull coals containing more fusin and more ash, with high  
specific gravities and poor coking qualities. The bright coals are more  
easily pulverized. The treatment recommended is crushing, screening and  
sizing to produce screened non-coking coal, fine concentrates suitable for  
coking, middlings (mainly dull coal), and refuse. (L).

GRIGOR'YEV, M. Yu., kandidat khimicheskikh nauk

Urgent tasks of the Kuznets Basin coal industry. Standartizatsiya  
no. 6:73-75 N-D '54. (MLRA 8:10)

1. Kuznetskiy Nauchno-issledovatel'skiy ugol'nyy institut  
(Kuznets Basin--Coal mining)

GRIGOR'EV, M. Yu.

✓4236. CHEMICAL NATURE OF DETONATION OF COAL. Grig. M. Yu.  
(Pap. to 2nd Coal Res. Conf., Leningrad, 1955; Trud. Gos. Univ.  
(Fiz.-Mat. Gos. Univ., Acad. Sci. U.S.S.R.), 1956, (1), 91-102).

GRIGOR'YEV, M. Yu

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62521

Author: Grigor'yev, M. Yu., Borodulin, V. A.

Institution: None

Title: On a Change-Over in Technological Schemes of Coal Concentration Mills of Kuznetsk Coal Fields Utilizing the Pneumatic Concentration Method

Original Periodicals: Ugol', 1955, No 5, 40-44

Abstract: On the basis of investigations of technological indexes of the operation of USh-3 separators and POM-1 pneumatic jigging machine it has been ascertained that concentration is most effective in the case of oversize classes of coal. Efficacy of concentration of fine classes decreases sharply which results in a lowering of the over-all concentration effect. The authors propose to subject the concentrate of size 13-0 and 6-0 mm obtained from USh-3 separator to a second concentration in POM-1, and to include in the technological scheme

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USSR/Chemical Technology - Chemical Products and Their Application. Treatment of  
Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62521

Abstract: of concentration of coal of ready and medium concentrability  
characteristics a dust flotation process.

Card 2/2

GRIGOR'YEV, M. YU.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62516

Author: Grigor'yev, M. Yu., Podbel'skiy, G. N.

Institution: None

Title: Industrial-Genetic Classification of Coal of the Kuznetsk Deposits

Original

Periodical: Izv. AN SSSR, otd. tekhn. n., 1956, No 2, 120-131

Abstract: Classification of coal must include parameters that characterize the degree of metamorphism (yield of volatiles) and genesis (contents of vitrenized and heliphysized components) while for industrial processing those relating to the capacity of the coal to yield a hard clinkering residue, namely coke. According to first named index coal is subdivided in 10 classes which differ by 3-5% in yields of volatiles on the basis of the combustible body. Each class comprises 10 groups differentiated in accordance with clinkering properties rated by magnitude of plastic layer expressed in mm, with differences of

Card 1/2

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of  
Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62516

Abstract: 2-3 mm between consecutive groups. In addition all varieties of coal are divided in 5 subgroups according to petrographic types that characterize the total content of vitrenized components expressed in percent. According to this classification each type of coal is designated by a 3 digit index in which the first integer denotes the class, the second the group, and the third the subgroup. This classification includes humic coal (lignite, coal and anthracite). Oxidized coal forms a special group. Coal varieties from other fields can be readily fitted into this classification and thus a single industrial and genetic classification can be evolved which covers all coal of USSR.

Card 2/2



GRIGOR' YEV, M.Yu., kandidat khimicheskikh nauk; POBBEL'SKIY, G.N.,  
kandidat tekhnicheskikh nauk.

Preparation characteristics of Kuznetek Basin coals with reference  
to their origin. Koks i khim. no.3:8-12 '56. (MLBA 9:8)

1. Kuznetkiy nauchno-issledovatel'skiy ugol'nyy institut.  
(Kuznetsk Basin--Coal)

GRIGOR'YEV, M. Yu.

2025. STANDARDIZATION OF METHOD OF DETERMINATION OF OXIDATION OF COALS.  
Grigor'ev, M. Yu. (Standartizatsiya (Standardization, Moscow), 1956, (3),  
36-40; abstr. In Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (12), 42105).  
Existing methods are reviewed. Attention is directed mainly to the new method  
of the Institute of Mining, Academy of Sciences U.S.S.R., based on determination  
of the ignition temperature of the coal when mixed with benzidine. Experiments  
on Kuzbass coals showed that the ignition temperature reflects the rate of the  
changes in the organic matter and the general course of oxidation. A number of  
corrections are required. With gassy and fat steam coals it is necessary to add  
10% of dry sand, to prevent the increased caking power of the coal from  
affecting the results. High moisture coals should be dried at 75°C for 20-25  
min. The method is recommended as standard for determining the limits of the  
oxidation zone in mines, and for testing coals loaded at mines and those in  
store.

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5, 15-57-5-6647  
PP 136-137 (USSR)  
AUTHOR: Grigor'yev, M. Yu.  
TITLE: The Chemical Nature of Metamorphism in Coal (K voprosu o khimicheskoy sushchnosti protsessa metamorfizma iskopayemykh ugley)

PERIODICAL: Tr. Labor. geol. uglya, AN SSSR, 1956, Nr 6, pp 93-102.  
ABSTRACT:

APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-

Card 1/8

15-57-5-0

# The Chemical Nature of Metamorphism in Coal (Cont.)

peat bog (the albumin of bacteria constitutes 60 to 80 percent of the total weight). The amount of accumulation of albumin substances in the original peat bog varies in direct proportion to the intensity of bacterial transformation of the plant remains; i.e., to the substances of the coal. The petrographic inhomogeneities of the coal are explained by the fact that various microcomponents (vitrain, fusain) were formed simultaneously, under the same conditions but from different substances (compounds). These microcomponents depend on the composition, structure, and chemical properties of the original compounds and on the environment during the variable course of development. The vitrified substances, richest in N, were formed from carbohydrates of plant origin and from albumin, the product of decomposition of bacterial bodies under conditions of complete inundation in the region of growth and accumulation of the plant material, the water being shallow and free from strong currents (continental swamps) (see figure). A process of polycondensation produces macromolecules with linear and with two- and three-dimensional structures. Molecules of

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15-57-5-6647

The Chemical Nature of Metamorphism in Coal (Cont.)

Polycondensates are multifunctional, reactive, and may react with one another to produce intramolecular transformations. The strong branching and the presence of unstable structural elements creates a destructive environment. Chemical destruction may occur in the development of coal at all stages of metamorphism, from peat to coal. High temperatures favor this destruction. A parallel development of polycondensates and destruction leads to the formation of higher molecular combinations of more stable systems of the structure, consisting chiefly of aromatic structures (lignin), but has been determined by the result of aromatic succession in the vitrified components, not the presence of aromatic structures. Lignin was a thick water material or the fusinised component. When there was a thick water material or the well-defined current, the products by hydrolysis of carbohydrates and albumin, and also their polycondensates, were washed away, and there occurred an enrichment in the original plant material of humic acids and lignin. Part of the lignin was converted to humic acids and the carried over into vitrified components, but the principal mass lost

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15-57-5-6647

The Chemical Nature of Metamorphism in Coal (Cont.)

its functional groups and was converted to fusain. The transformation of the organic mass of coal should be considered in association with the geological conditions of deposition of the bed. The most important geological factors, pressure and temperature, might appear at different times in the growth of the bed in irregular manner. This explains the existence of Devonian brown coals side by side with anthracites of Tertiary age. It also explains the presence, in almost any coal basin, of variously metamorphosed coals.

A. N. G.

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The Chemical Nature of Metamorphism in Coal (Cont.)

15-57-5-6647

Fat, wax,  
tar

Saponification, etc.

Albumin (products  
of decomposition  
of bacterial bodies)

Amino acids

Cellulose  
and other  
carbohydrates

Hydrolysis

Carbo-  
hydrates

Polyconden-  
sates

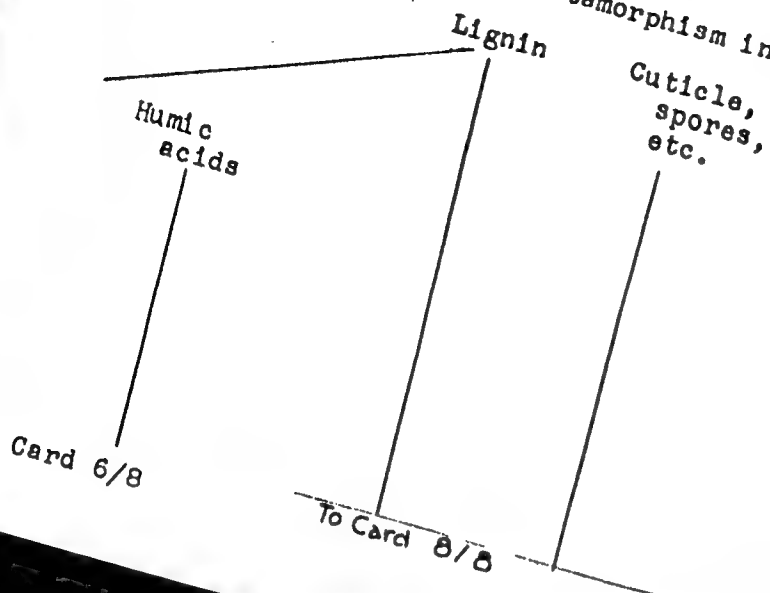
To Card 6/8

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The Chemical Nature of Metamorphism in Coal (Cont.)

15-57-5-6647

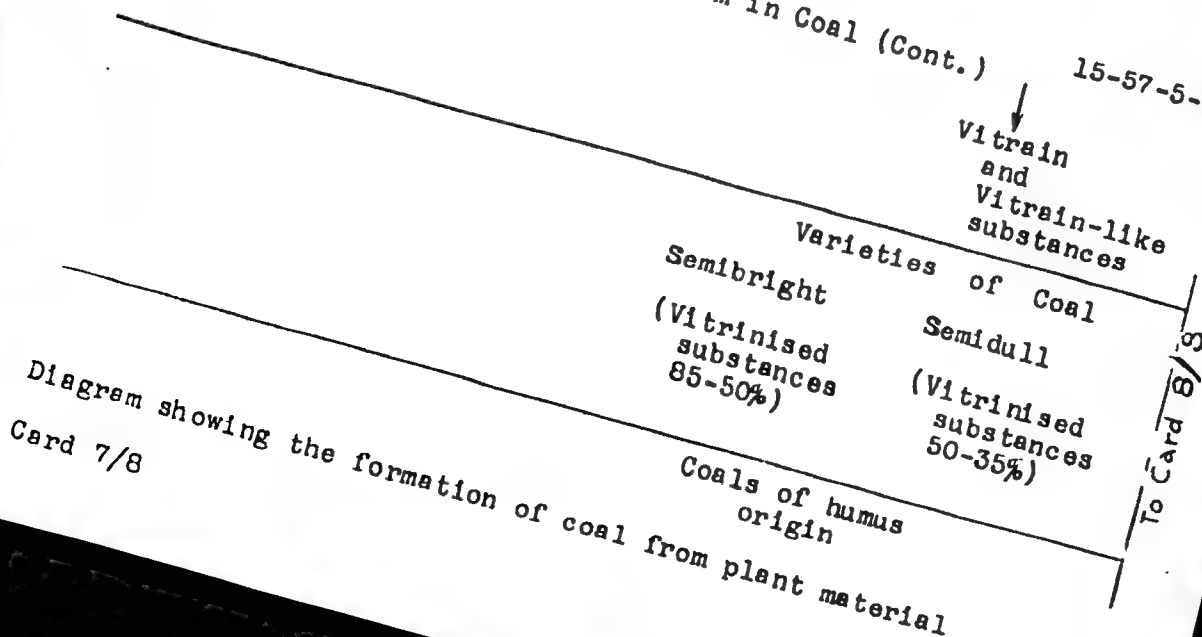


APPROVED FOR RELEASE: Thursday, July 27, 2000

86-005

The Chemical Nature of Metamorphism in Coal (Cont.)

15-57-5-6647





Principal directions in the coal utilization of the Kuznetsk Basin based on the genesis of its organic material and mineral admixtures. M. Yu. Grigor'ev and G. N. Podbel'skii. *Izvest. Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk* 1956, No. 10, 98-107. —A classification of Kuznetsk Basin coal enrichment is based on the yield and ash content of the concentrates and gang; sp. gr. is 1.5-1.8. The genesis of the mineral inclusions and the deposition conditions of the coal seams are discussed. The diagram permits determination of the beneficiation characteristics of the coal, a control of high quality of the clean coal, and the efficiency of the coal-cleaning installation.

W. M. Steinberg

GRIGOR'YEV, M.Yu., kand.khim.nauk.

Genesis of Kuznetek Basin humus coals. Nauch. trudy po vop. pererab.  
1 kach ugl. no.4:3-47 '57. (MIRA 11:5)  
(Kuznetek Basin--Coal geology)

GRIGOR'YEV, M.Yu., kand.khim.nauk; PODHEL'SKIY, G.N., kand.tekhn.nauk

Industrial and genetic classification of coal. Nauch. trudy po vop.  
pererab. i kach ugl. no.4:48-66 '57. (MIRA 11:5)  
(Coal--Classification)

GRIGOR'YEV, M.Yu., kand.khim.nauk; MOREVA, V.P., inzh.

Optical density of bensol extracts from coal as an added indice  
of its qualitative characteristic. Nauch. trudy po vop. pererab.  
1 kach ugl. no.4:67-74 '57. (MIRA 11:5)  
(Coal--Testing)  
(Benzene--Optical properties)

GRIGOR'YEV, M.Yu. kand.khim.nauk; PODHEL'SKAYA, Ye.F., st. nauchnyy sotrudnik

Increasing the rate of agglomeration during flotation of  
petrographically inhomogeneous Kuznetsk Basin. Nauch. trudy po  
vop. persrab. i kach ugl. no.4:75-85 '57. (MIRA 11:5)  
(Kuznetsk Basin--Coal geology)  
(Karaganda Basin--Coal geology)  
(Flotation)

GRIGOR'YEV, M.Yu., kand.khim. nauk; BORODULIN, V.A., inzh.

Investigating the performance of USh-3 pneumatic separators  
and POM-1 jigs at the Kuznetsk Basin coal preparation plant.  
Nauch. trudy po vop. pererab. i kach ugl. no.4:86-98 '57.

(MIRA 11:5)

(Kuznetsk Basin--Coal preparation)  
(Separators (Machines))

GRIGOR'YEV, M.Yu.

**9662/108**

## THE Y-BOX INFORMATION

**9662/108**

*Isomiris versipala goryunskitchi* Isomiris (Annals of the Entomological Society of America, 1959, 50: 345). Errata ally inserted. 2,000 copies printed.

1969. Eds.: V. M. Karginov, Corresponding Member, USSR Academy of Sciences, and  
N. G. Titov, Doctor of Chemical Sciences; Ed. of Publishing House: A. L.  
Makhovskiy, Tech. Ed.: I. P. Mas'kina.

**REMARKS:** This collection of articles is intended for geoscientists, geologists, and other specialists interested in the geosciences of solid mineral fuels.

**DISCUSSION:** The collection of papers on the genesis of solid mineral fuels has been prepared for presentation at the 2nd All-Union Conference on this subject. The formation of humic acids and peat from the decomposition of microorganisms and plants is discussed in connection with the origin of hard coal and brown coal, and the role of bacteria in the formation of coal. The origin of coal is analyzed and shown in a number of tables. Biogenic "substrates" all shades are analyzed as are the by-products of the biogeochemical basis. Microorganisms and carbonization of coal found in different parts of the Ural and the Uralskaya Mts are also discussed. The transformation of peat into inter into combustible minerals is analyzed. Furthermore necessary individual articles.

articles.  
Standard. R. 2. Grants of Patents Subversive of the

**Pearce, A. S., On the Question of the Origin of Saline Waters in the**

Karstner, B. B., and J. A. Plummer. Lignite and Initial Stages of Coal  
Formation

**STANLEY, L.S.** **Articles of Brown Coal Found in the Mesozoic-Lower Beds of the Bittern**

Chernomyr, Ya. M., Irregular Carbonation of Mesozoic Coal Ponds on the Eastern Flank of the Central and Northern Urals

Boşpolatova, L. I. Petrographic and Chemical Characteristics of Some Types of Coal from Volcanic and Metavolcanic Regions

Clayburn, L. V. Conditions of Formation of Slightly Carbonized Coal From Northern Ohio Brown Coal Beds

SPENCER, L. A. Interpretation of Iron Coal from the Eastern Flank of the Northern Field  
Vase Lavanya Deposits of the Eastern Flank of the Northern Field

Kindrov, A. I. Geologic Conditions of Investigation of the  
State in the Northwestern Part of the Russian Platform

~~Copies are being furnished at the Bureau's expense~~

Chernomir, L. V. *Genese i a Mikroscopicheskaya Charakteristika of Flavella Gobi*  
Petersburg, L. V. 1906

of the Domes during the eruption.

Publ. L. V. Grande Sulfer in Cond.

**Kasatkina, V. I. Some General Physical and Chemical Questions Concerning the Coal-forming Process**

Matter Into Protein Combustible Minerals and the Combustion of These  
 Minerals, I. I. Characteristics of the Minerals of Combustible Minerals

amson, I. I., Genetic Features of the Coal Bedshales as Determined by Petrographic Methods

Shcherba, V. I. Chemical Nature of the Basic Organic Resin of Hard and Brown Coal and Changes During Retorting

**Ushakov, V. A. Changes in the Structure and Properties of Resin Acids During the Coal-Curing Process**

1107, B. O. Role of Mineral Elements in the Coal-forming Process

Organic Sulfurous Compounds Contained in Coal

Doria, S.S.      307/68-59-1-1676  
 Conference on the Winding of Resources of Coking Coals  
 in the Kuznetsk' Basin (Sovesheniye po zashtreniyu  
 yazyay ugotov'nyy bazy kokovaniya v Kuznetskom basseyne)  
 1959. Moskva: Moks i tshchizna, 1959. Nr 1, pp 56 - 60 (USSR)  
 The conference took place in the town of Kemerovo, on  
 June 12-13, 1959. The results of the work of the  
 of the Kemerovo Sovnarkhoz and by the Communist Council  
 of the Kuznetsk' Basin (Kuzbassovskiy Sovetskii  
 Gosk' Soveta Ministrov SSSR (State Scientific-Technical  
 Committee of the Council of Ministers of the USSR). Chief  
 engineer of the Kuzbassugol, M.I. Kuznetsov, reported on  
 the perspective of winning coking coals from the Kuznetskij  
 basin during 1959-1965. The total deliveries of coking  
 coals from the Kuznetskij Basin should increase from 23.1  
 million tons in 1958 to 42 million tons in 1965. In order  
 to attain the above output in 1959-1965, the following  
 measures must be taken: a) eliminating of 26 new shafts of an  
 output capacity of 37.6 million tons; b) winding operation  
 in 22 new shafts of a capacity of 25.9 million  
 tons; reconstruction of 21 shafts of a capacity of 25.9 million  
 tons; construction of 15 coal washeries of a capacity of  
 50 million tons/year, starting operation during 1959-1965  
 in 12 coal washeries of a capacity of 31.6 million tons/year.  
 He also gave qualitative characteristics of coking coals  
 from regions under development.

Case 4:11-bj-00001-UNA Document 1-1 Filed 02/01/13 Page 1 of 1

50 million tons/year, starting operation during 1959-1965 in 12 coal seams of a capacity of 33.6 million tons/year. He also gave qualitative characteristics of coking coals from this region under development:

1. The majority of the coal seams are of the 7th and 8th stages of the coalification process. Requirements of the 7th stage, which work for the coking coals during the last 7 years, in which the possibilities of the possibility of utilizing weakly caking coals exist, but the possibility of utilizing weakly caking coals which can solve all the difficulties in securing requirements of the steel industry. He considers that of all the new methods of coal preparation which can be effectively utilized in the near future, the preferential crushing in conjunction with stamp charging is the only one. He considers that by this method about 9 million tons of coke can be produced.

2. It is better communicated on the way carried out in the nearly petrochemical industry (Green Polytechnical Institute) on coking of blends with a high content of kmetinsene coals with additions of finely crushed coke breeze. It was established that an addition of 5% of coke increases bulk density of blends on average by 20%. With a 5% of coke additions up to 60% of gas coals can be incorporated without any decrease in the coke quality. 2. Once should be crushed to pass screens with 500 ash/cm<sup>2</sup>. In addition that requirements for caking are decreased.

3. The other few (Kemerovo Mining Institute) recommends that the requirements for increasing caking coal resources from the Kuznetskaya Basin. Therefore, coals of 8th and 9th can be replaced by coals of 8<sub>2</sub>, 8<sub>3</sub> and 9<sub>2</sub> without decreasing coke quality by application of some new methods of preparation of blends which are at present under investigation. The main criterion, based is that of the ash content. Other coals are petrographic beneficiation by preferential crushing and further beneficiation to a certain degree. The results of thermally treated coals 30-50% addition of them to 7<sup>th</sup> treated gas coals can replace 30-50% of 8<sub>1</sub> and 8<sub>2</sub> coals.

4. The Kuznetskaya (Kuznetskaya Basin) in a case of replacement of the 7<sup>th</sup> stage of coking coal for caking by the utilization of gas and 8<sub>2</sub> coking coals in blends, considered that the main criterion is that of caking such coals is present in the last method of utilizing considered are the radiation of the other methods and addition of calcium pitch briquetting and subsequent coking.



Conference on the Widenng of Resources of Coking Coals in the  
Kuznetsky Bsk.

A.P. Dubrovina (Vostrogoizobrabatki) in a paper "Perspective of Coal Beneficiation in the Kuznetsky Bsk. for the next 7 Years" reported that the development of coal beneficiation lags behind coal mining. Ash content of coals sent for coking increased by 0.5% in comparison with 1955, and the ash content of coal sent to washeries increased from 1.5% in 1955 to 31.15 in 1957. Consequently, the yield of concentrates decreased from 21.2% to 18.7% in washeries. In 1965, the yield of concentrates will decrease to 7%. A brief outline of planned construction of coal washeries is given (15 new washeries of total output of 23.4 million t/year; in 1966, 3 washeries

with a total output of 5.1 million t/year could be in operation). Further development in the Kuznetsky Basin are in regions containing coals with high ash and difficult-to-clean coals. In the existing mines also some increase in the ash and moisture content is expected. Therefore, in new coal beneficiation plants, only wet treatment methods without preliminary separation into size fractions should be considered.

A.E. Kollodiy (Kubansugleobogobeniye Trust) reported on methods of increasing the efficiency of coal beneficiation processes in existing coal washeries. Works in the Kuznetsky Bsk.: Of 28 operating washeries, 21 are operating with the pneumatic method, 4 by a combination of pneumatic and wet process and 3 by wet method. During the last 3 years, the ash content of coals has increased by 2.2% and the moisture content by 0.4%. An effort to decrease the ash content in concentrates, as well as to treat them pneumatically cleaned coals was introduced on some plants. This decreased the ash content by 0.5% and increased the yield of concentrates by

1.5-2.5%. A cascade scheme of beneficiation was developed on pneumatically operating plants consisting of the fact that not individual-size fractions 0-10, 10-50 mm are treated in pneumatic separators but 0-50 mm fractions for jigging dust-containing coals 10-50 mm. Pneumatic feeding type, from heavy to heavy, was developed instead of the pneumatic feeding type.

A.M. Kabanov (VUK-18) in a paper "A Decrease in the Consumption of Coals K and L on the Kuznetsky Metallurgical Combine by Incorporating into Bends Gas Coals" pointed out that coke ovens in the Urals and Siberia are designed for a standardized 1.2 m<sup>3</sup> of coke, but in reality, for a coking period in the control lines 1.350 - 1.410 m<sup>3</sup>. With increasing proportion of high-shrinkage coals, the quality of coke deteriorates. An increase in the coking period is impossible due to a shortage of coking capacity.

Experimental work on coking indicated that it is possible to decrease the proportion of K coals but for this purpose, the existing technology of coal preparation and coking conditions should be modified. For this purpose, the development of an appropriate plant is necessary (no details).

Card 7/8

ASSOCIATION: SOVS AN SSSR

Card 8/8

GRIGOR'YEV, M.Ya., dotsent; POPOV, V.S., dotsent

Characteristics and mechanics of coal and gas outbursts in coal  
mines. Izv. vys. ucheb. zav.; gor. zhur. no.3:44-52 '60.  
(MIRA 14:5)

1. Kemerovskiy gornyy institut.  
(Coal mines and mining)

GRIGOR'YEV, N.; MEDVEDIK, S.

Load deflection during gantry crane operations. 'Rech. transp. 20  
no. 5:16-17 My '61. (MIRA 14:5)  
(Cranes, derricks, etc.) (Loading and unloading)

L 20723-65 BWT(d) Po-4/Pq-4/Pg-4/Pk-4/Pl-4 BBD/AFWL/ASD(a)-5/AFM(df)/AFETR/  
AFIC(a)/AFGC(b)/AFGC(a)/ESD(dp)/IJP(e) BG

ESSJN NR: AP4049504

S/0309/64/000/011/0064/0070

AUTHOR: Grigor'yev, N. (Colonel, Engineer); Ryabkov, V. (Lieutenant Colonel, Engineer) B

TITLE: Automated control systems

SOURCE: Aviatsiya i kosmonavtika, no. 11, 1964, 64-70

TOPIC TAGS: aircraft control system, automatic pilot, aircraft instrumentation, aircraft testing, pilot training

ABSTRACT: The article points out that the growth of new weapons has necessitated the development of new control mechanisms for controlling them. The comment is made that in aviation, for example, more money is spent on controls than on what they are controlling. Also, the cost of ground maintenance has been increased several times. The article names various types of systems used for control; intermittent, built-in systems, complex steering equipment (guidance), power systems, weapons and flight apparatus as a whole, as well as special automated devices for checking various parts of flight systems. Some systems, for example, show the efficiency levels of the craft's various components while others check on their synchronization. The authors describe the control pulses used in aircraft control and observe that built-in systems do little to speed up maintenance.

Caro 1/2

L 20723-65

ACCESSION NR: AP4049504

testing. According to the authors, two basic systems are in use -- SAK and PAK. SAK is a mobile system consisting of three units, or carts, one of which contains control equipment, including computer programs with a built-in self-correction system as well as strain detectors, fidelity testers, and display and recording devices. The other two units are described as containing signal generators, switching systems, and signal transformers, each of which is discussed. PAK is a system to which component parts may be linked. Signals are generated to permit calibration of different units which can then serve to check the various components connected to the equipment and controlled from the panel. SAK is considered to be a superior system since PAK only permits the check of a limited number of components, and is therefore, not universal. SAK, in contrast, also contains radar equipment for strategic aircraft. It measures pulse, power, sensitivity of reception and simulates ground targets for various distances and rates of speed. Orig. art. has: 6 block diagrams and 2 graphs.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: NG, AC

NO REF SOV: 000

OTHER: 000

Card 2/2

1. ORIGOR'YEV, N.; IGNAT'EV, P.
2. USSR (600)
4. Wheat Trade
7. State of the wheat market in capitalist countries. Vnesh. torg. 23, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Unclassified.

GRIGOR'YEV, N., inshener.

Improve records kept of repair jobs. Muk.-elev.prom. 20 no.3:  
12 Mr '54. (MIRA 7:7)

1. Poltavskaya oblastnaya kontora Zagotserno.  
(Grain elevators--Repairing)

GRIGOR'YEV, N., inzhener.

Defects of the standard plan for the warehouse of 3,200 ton capacity. Muk.-elev.prom. 20 no.9:29 S '54. (MLBA 7:12)

1. Poltavskaya kontora Zagotserno.  
(Granaries)



MIKHAYLOVA, L., inzhener; GRIGOR'YEV, M., inzhener.

Suspended sieve for removing shelled grains from moving ear corn.  
Muk.-elev.prom. 23 no.3:25 Mr '57. (MLRA 1015)

1. Odesskaya oblastnaya kontora Ulrglavzerno.  
(Corn-handling machinery)

GRIGOR'YEV, N.

MIKHAYLOVA, L., inzhener; GRIGOR'YEV, N., inzhener.

Mobile drier for ear corn. Muk.-elev. prom. 23 no.6:23 Je '57.  
(MIRA 10:9)

1. Odesskoye oblastnoye upravleniye khleboproduktov.  
(Corn (Maize)--Drying)

GRIGOR'YEV, N., inzh.; MIKHAYLOVA, L., inzh.

Equipment for the mechanized handling of ear corn. Muk-elev.  
prom. 24 no.6:26 Je '58. (MIRA 11:7)

1.Odesskoye oblastnoye upravleniye khleboproduktov.  
(Corn (Maize))

GRIGOR'YEV, N.; KRYLOV, V.; RAYSKIY, A., mekhanik

Preventive maintenance of equipment. Muk.-elev.prom. 25  
no.9:27 S '59. (MIRA 12:12)

1. Odesskoye oblastnoye upravleniye khleboproduktov (for Grigor'yev, Krylov).
  2. TSekh Kuybyshevskogo mel'kombina (for Rayskiy).
- (Grain-handling machinery--Maintenance and repair)

GRIGOR'YEV, N., inzh.

One more corn processing plant has been put into operation. Muk.-  
elev.prom. 26 no.1:28 Ja '60. (MIRA 13:6)  
(Odessa--Grain elevators) (Corn (Maize))

GRIGOR'YEV, N.

Salubrity of the Yevpatoriya health resort. Okhr. truda i sots.  
strakh. 3 no.7:14-16 J1 '60. (MIRA 13:8)

1. Nachal'nik Yevpatoriyskogo kurortnogo upravleniya.  
(Yevpatoriya--Sanatoriums)

GRIGOR'YEV, N. (Alma-Ata)

Fine beginning. Zdorov'e 7 no. 5:6 My '61.  
(CALLISTHENICS)

(MIRA 14:4)

GRIGOR'YEV, N.

Frontier veteran. Voen. znan. 39 no.2:36 F '63. (MIRA 16:3)  
(Smolin, Aleksandr)



GRIGOR'YEV, N.A.

Chishki (Chanty-Argun) mineral water deposit. Sov. geol. 7 no.10:  
136-141 O '64. (MIRA 17:11)

1. Severo-Kavkazskoye otdeleniye Laboratorii gidrogeologicheskikh  
problem im. F.P. Savarenskogo.

FRUMKIN, A. N.; POLYAROVSKAYA, N. S.; BRIGOR'YEV, E.; BARTERAYA, I. A.

"Electrocapillary phenomena on gallium."

report presented at 15th Mtg, Intl Comm of Electrochemical Thermodynamics & Kinetics, London & Cambridge, UK, 21-26 Sep 1964.

Inst of Electrochemistry, AS USSR.

GEIGOR'YEV, E., inzh.-polkovnik; MYABKOV, V., inzh.-podpolkovnik

Automatic control systems. Av. i kosm. 47 no.11:64-70 E '64.  
(MIRA 17:11)

GRIGOR'YEV, N.A.

Glucine, a new mineral of beryllium. Zap. Vses. min. ob-va 92  
no.6:691-696 '63. (MIRA 18:3)

1. Institut geologii Ural'skogo filiala AN SSSR, Sverdlovsk.

GRIGOR'YEV, N.A.

Todorokite from the hydrothermal-pneumatolytic zone in the  
Urals. Trudy Inst. geol. UFAN SSSR no.70:197-203 '65.  
(MIRA 18:12)

POKROVSKIY, P.V.; GRIGOR'YEV, N.A.; POTASHKO, K.A.

Secondary phosphates of beryllium and their distribution in the  
weathering surface of mica-fluorite greisens. Trudy Inst. geol.  
UFAN SSSR no.70:205-209 '65. (MIRA 18:12)

POKROVSKIY, P.V.; GRIGOR'YEV, N.A.

Mechanism of the formation of rhythmic-banded structures in  
the process of diffusion metasomatism. Trudy Inst. geol.  
UFAN SSSR no.70:211-219 '65. (MIRA 18:12)

L 16443-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG  
ACCESSION NR: AF4043555 S/0020/64/157/004/0957/0940

AUTHORS: Frumkin, A.N.; Academician; Grigor'yev, N.B.; Bagotskaya, I.A.

TITLE: Investigation of the structure of the electric double layer on gallium by the method of measuring differential capacity

SOURCE: AN SSSR. Doklady\*, v. 157, no. 4, 1964, 957-960

TOPIC TAGS: electric double layer, gallium, differential capacity, gallium dissolution, charge density, water adsorption, dropping gallium electrode

ABSTRACT: The differential capacity on a dropping gallium electrode was measured at 30C in various  $\text{Na}_2\text{SO}_4$ ,  $\text{NaClO}_4$ ,  $\text{LiCl}$ ,  $\text{NaCl}$ ,  $\text{KCl}$ ,  $\text{CsCl}$ ,  $\text{KI}$  and  $\text{KCNS}$  solutions, 1N neutral salt solutions were used for measurements at potentials from -1.9 to -1.2 volts. For measurements from -1.3 to -1.1 volts the solutions were acidified to 0.01N, and for measurements from -1.15 volts to positive voltages they were acidified to 0.1N; except for  $\text{KI}$  and  $\text{KCNS}$  when  $\text{HCl}$  was used, the acid anions were the same as those of the salt; the total electrolyte concentrations were 1N. The electrode was prepared according to the description by A.N. Frumkin and A.V. Gorodetskaya (Zs. Phys. Chem.,

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ACCESSION NR: AP4043555

136, 215 (1928)). At negative potentials corresponding to areas of cation adsorption, the differential capacity  $C$  increased in going from  $\text{Li}^+$  to  $\text{Cs}^+$ . In solutions containing the same cations but different anions the differential capacity curves almost coincided (fig. 1);  $C$  increased sharply at potentials corresponding to the start of anion adsorption in the following order  $\text{CH}_3\text{S}^- > \text{I}^- > \text{Br}^- > \text{Cl}^- > \text{SO}_4^{2-} > \text{ClO}_4^-$ . The capacity was independent of frequency (318 cycles to 50 kilocycles/sec.) and was assumed to be the capacity of the electric double layer. The absence of dispersion of  $C$  indicated the process of Ga dissolution, which takes place at even more positive potentials, is irreversible. The relationship between the charge density  $\epsilon$  and the potential  $\varphi$  for Ga and Hg in 1N solutions was compared (fig. 2). In the vicinity of the zero charge in 1N  $\text{Na}_2\text{SO}_4$   $C_{\text{Ga}} = 135$  and  $C_{\text{Hg}} = 29.5$  microfarad/cm<sup>2</sup>. Further from the zero charge the rate increase in  $\epsilon$  for Ga was reduced; it approached  $\epsilon$  for Hg. Thus an electric double layer of the same state as on Hg was formed on Ga, only at a more positive potential with respect to the

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ACCESSION NR: AP4043555

zero charge point. The increase in C on Ga at less negative values was attributed not to the adsorption of O or OH on the Ga surface, nor to an increase of Ga ions in the boundary layers, but to the adsorption of water on Ga, the water dipole being oriented with its negative end toward the Ga proportionally to the shift in Ga potential. "I thank B.B. Damaskin for participation in evaluating the obtained results." "Gallium was purified by the Institute of rare metals method. We take the opportunity to thank AN SSSR assoc. member N.P. Saghin for assistance in obtaining it." Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 31Mar64

SUB CODE: GC

ENCL: 02

NR REF SOV: 000

OTHER: 005

Card 3/5

L 16443-65  
ACCESSION NR: AP1043555

ENCL: 01

0

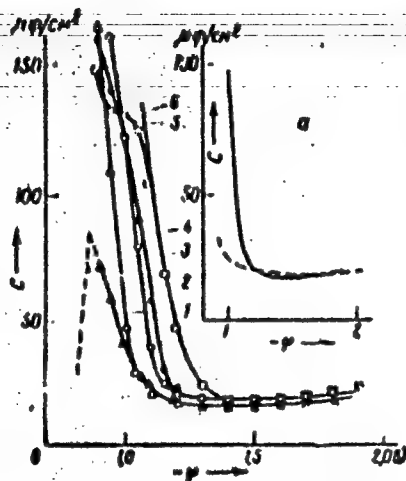


Figure 1

Curves of the differential capacity on gallium in 1N solutions:  
1--NaClO, 2--Na<sub>2</sub>SO<sub>4</sub>, 3--KCl, 4--KBr, 5--KI, 6--KCNS. Fig. 1a:  
dotted line --D.C. Gramme's data (Tr. IV. sovetsk. po elektro-  
khimii, M., 1959, str. 27) for 0.1N KCl; solid line--our data.

Card: 4/5

L 16443-65

ACCESSION NR: APL043555

ENCL: 02

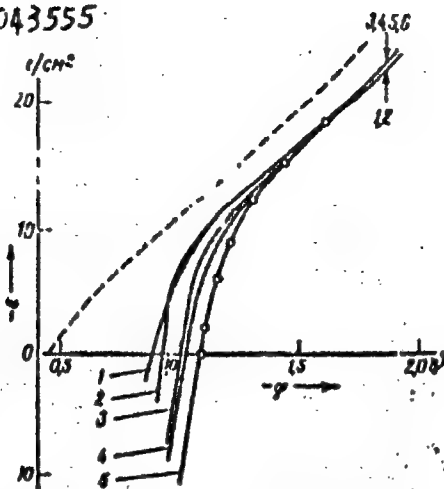


Figure 2

Relationship between charge density and potential on gallium in 1N solutions; 1-- $\text{NaClO}_4$ , 2-- $\text{Na}_2\text{SO}_4$ , 3-- $\text{KCl}$ , 4-- $\text{KBr}$ , 5-- $\text{KI}$ , points on curve 5-- $\text{KCNS}$ . Dotted line--curve for mercury on 1N  $\text{Na}_2\text{SO}_4$ .

Card: 5/5

L 25625-65 EPF(n)-2/EPA(m)-2/EWT(m)/EPA(bb)-2/EWP(b)/EWA(d)/EWP(t) Pt-10/  
 Pu-4 IJP(c) WH/JD/JG/WB S/0020/64/157/006/1455/1458 48  
 ACCESSION NR: AP4044890 37  
 8

AUTHOR: Frumkin, A. N. (Academician); Polyanovskaya, N. S.; Grigor'yev, N. B.

TITLE: Electrocapillary curves of liquid gallium 27

SOURCE: AN SSSR. Doklady\*, v. 157, no. 6, 1964, 1455-1458

TOPIC TAGS: gallium, electrocapillary curve, gallium purity, electrocapillary effect, capacitance, purity control

ABSTRACT: The electrocapillary effects and adsorption of surface active materials on pure gallium and the effect of the degree of purity on the electrocapillary properties of Ga were studied. The interfacial tension ( $\sigma$ ) values obtained in various HCl-containing solutions in the potential interval from -0.8 to -1.8 v ( $\varphi$ ) indicated the absence of effects of hydroxyl and hydrogen adsorption at the anode and cathode ends of each curve. The experimental electrocapillary curves compared with the  $\sigma$ - $\varphi$  curves calculated by double integration from differential capacitance (C)- $\varphi$  data. From the zero charge potentials ( $\varphi_0$ ) and  $\sigma_{\max}$  values of Ga in different solutions it was found that the surface activity of  $\text{SO}_4^{2-}$  (or  $\text{HSO}_4^-$ )  
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L 25625-65

ACCESSION NR: AP4044890

$\text{Cl}^-$ ,  $\text{Br}^-$ ,  $\text{I}^-$  decreased in this same order as in Hg. The surface activity of  $\text{SO}_4^{2-}$  was greater than, and of  $\text{Cl}^-$  and  $\text{Br}^-$  was similar to that on Hg;  $\text{ClO}_4^-$  had no effect. The high capacitance of the electric double layer of Ga at not too negative potentials and the asymmetry of the electrocapillary curves was believed to be determined by the chemisorption of water molecules, whose orientation changed with polarization of the metal. The purity of Ga had a strong effect on the electrocapillary curves;  $\phi_{\text{max}}$  was 41 dyne/cm higher for 99.9998% pure Ga than for the 99.996%, and the  $\phi_{\text{max}}$  shifted to more negative values. The possibility of controlling Ga purity by electrocapillary data was suggested. "We acknowledge B. B. Damaskin's participation in evaluating the results." "We thank AN SSSR associated member N. S. Sazhin for assistance in obtaining samples of this gallium." Orig. art. has: 3 figures and 1 table

ASSOCIATION: Moskovskiy gosudarvennyy universitet im. M. V. Lomonosova  
(Moscow State University)

SUBMITTED: 12Mar64

NR REF SOV: 005

ENCL: 00

OTHER: 006

SUB CODE: GC, EM

Card 2/2

GRIGOR'YEV, N.

Process pulse crop seeds at corn plants. Muk.-elev. prom. 28 no.8:11-12  
Ag '62. (MIRA 17:2)

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 Series also issued. 8,600 copies printed.  
 Additional Sponsoring Agency: USSR. Ministerstvo svyazi.  
 Tsentral'nyy nauchno-issledovatel'skiy institut.  
 Ruzh. M.: A. Ye. Voznina; M.: R. A. Kuznetsov; Tech. M.:  
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